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ABC LABORATORIES, INC.
EAST 4922 UNION AVENUE
SPOKANE, WA 99219
509-534-0161

RECEIVED
FEB 23 1990
SUPERFUND BRANCH

REPORT TO: Spokane County Dept. of Utilities
N. 811 Jefferson
Spokane, WA 99210

LAB NO: 33317-90
DATE: 2-12-90
SAMPLE DATE: 2-7-90

ATTN: Bruce Austin

P.O.#:

DESCRIPTION: Perform Volatile Organic Scan on submitted samples from the wells in the Colbert
Landfill area. Analyses performed by methods outlined in proposal of December 8th, 1988.

DETECTION LIMITS: 1 part per billion

ND: Not Detected

This document contains six pages.

Respectfully Submitted,
ABC LABORATORIES, INC.



W.E. Burkhardt
Manager

USEPA SF



1414341

ABC LABORATORIES, INC.

Spokane County Dept. of Utilities

Lab NO. 33317-90

NAME

WELL NO.

Travel
Blank
2-7-90

Lab
Blank
2-7-90

Travel
Blank
2-8-90

Lab
Blank
2-8-90

Lab
Blank
2-9-90

(b) (6)

1573F-1

Chloroform	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ND	ND	ND	ND	ND	ND
Trichloroethylene	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND
1-Pentene	ND	ND	ND	ND	ND	ND
Cyclopentane	ND	ND	ND	ND	ND	ND
Trans 2-Hexene	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND
Ethylene DiBromide	ND	ND	ND	ND	ND	ND
Ethyl Benzene	ND	ND	ND	ND	ND	ND
M-xylene	ND	ND	ND	ND	ND	ND
O-xylene	ND	ND	ND	ND	ND	ND
P-xylene	ND	ND	ND	ND	ND	ND
Cumene	ND	ND	ND	ND	ND	ND
1,2,4-Trimethyl Benzene	ND	ND	ND	ND	ND	ND
P-cymene	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND
M-dichlorobenzene	ND	ND	ND	ND	ND	ND
O-dichlorobenzene	ND	ND	ND	ND	ND	ND
P-dichlorobenzene	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND
Trans 1,2-Dichloroethane	ND	ND	ND	ND	ND	ND
Trans 1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND
Cis 1,3-Dichloropropylene	ND	ND	ND	ND	ND	ND
Trans 1,3-Dichloropropylene	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND
1,1,2,2-trichloroethane	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether	ND	ND	ND	ND	ND	ND

ABC LABORATORIES, INC.

Spokane County Dept. of Utilities

Lab NO. 33317-90

NAME

(b) (6)

WELL NO.

1573K-3

1073J-1

1573R-1

1073M-4

1573C-10

10730-1

Chloroform	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ND	ND	ND	ND	ND	ND
Trichloroethylene	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND
1-Pentene	ND	ND	ND	ND	ND	ND
Cyclopentane	ND	ND	ND	ND	ND	ND
Trans 2-Hexene	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND
Ethylene DiBromide	ND	ND	ND	ND	ND	ND
Ethyl Benzene	ND	ND	ND	ND	ND	ND
M-xylene	ND	ND	ND	ND	ND	ND
O-xylene	ND	ND	ND	ND	ND	ND
P-xylene	ND	ND	ND	ND	ND	ND
Cumene	ND	ND	ND	ND	ND	ND
1,2,4-Trimethyl Benzene	ND	ND	ND	ND	ND	ND
P-cymene	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND
M-dichlorobenzene	ND	ND	ND	ND	ND	ND
O-dichlorobenzene	ND	ND	ND	ND	ND	ND
P-dichlorobenzene	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND
Trans 1,2-Dichloroethane	ND	ND	ND	ND	ND	ND
Trans 1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND
Cis 1,3-Dichloropropylene	ND	ND	ND	ND	ND	ND
Trans 1,3-Dichloropropylene	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND
1,1,2,-richloroethane	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether	ND	ND	ND	ND	ND	ND

ABC LABORATORIES, INC.

Spokane County Dept. of Utilities

Lab NO. 33317-90

NAME

(b) (6)

WELL NO.	1073D-1	0273P-3	1573H-2	1473M-1	1473D-2	1073M-2
Chloroform	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ND	1	ND	ND	ND	ND
Trichloroethylene	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	37	ND	19	ND	ND
Tetrachloroethylene	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND
1-Pentene	ND	ND	ND	ND	ND	ND
Cyclopentane	ND	ND	ND	ND	ND	ND
Trans 2-Hexene	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND
Ethylene DiBromide	ND	ND	ND	ND	ND	ND
Ethyl Benzene	ND	ND	ND	ND	ND	ND
M-xylene	ND	ND	ND	ND	ND	ND
O-xylene	ND	ND	ND	ND	ND	ND
P-xylene	ND	ND	ND	ND	ND	ND
Cumene	ND	ND	ND	ND	ND	ND
1,2,4-Trimethyl Benzene	ND	ND	ND	ND	ND	ND
P-cymene	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND
M-dichlorobenzene	ND	ND	ND	ND	ND	ND
O-dichlorobenzene	ND	ND	ND	ND	ND	ND
P-dichlorobenzene	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND
Trans 1,2-Dichloroethane	ND	ND	ND	ND	ND	ND
Trans 1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND
Cis 1,3-Dichloropropylene	ND	ND	ND	ND	ND	ND
Trans 1,3-Dichloropropylene	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND
1,1,2,-richloroethane	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether	ND	ND	ND	ND	ND	ND

ABC LABORATORIES, INC.

Spokane County Dept. of Utilities

Lab NO. 33317-90

NAME

(b) (6)

North Glen
Estates

North
Meadows

(b) (6)

WELL NO.	0273C-4	0273F-2	0273C-5	1073D-2	1573A-2	1473C-5
Chloroform	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ND	ND	ND	ND	ND	ND
Trichloroethylene	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	6	ND	ND
Tetrachloroethylene	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND
1-Pentene	ND	ND	ND	ND	ND	ND
Cyclopentane	ND	ND	ND	ND	ND	ND
Trans 2-Hexene	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND
Ethylene DiBromide	ND	ND	ND	ND	ND	ND
Ethyl Benzene	ND	ND	ND	ND	ND	ND
M-xylene	ND	ND	ND	ND	ND	ND
O-xylene	ND	ND	ND	ND	ND	ND
P-xylene	ND	ND	ND	ND	ND	ND
Cumene	ND	ND	ND	ND	ND	ND
1,2,4-Trimethyl Benzene	ND	ND	ND	ND	ND	ND
P-cymene	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND
M-dichlorobenzene	ND	ND	ND	ND	ND	ND
O-dichlorobenzene	ND	ND	ND	ND	ND	ND
P-dichlorobenzene	ND	ND	ND	ND	ND	ND
Methyl Ethyl-Ketone	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND
Trans 1,2-Dichloroethane	ND	ND	ND	ND	ND	ND
Trans 1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND
Cis 1,3-Dichloropropylene	ND	ND	ND	ND	ND	ND
Trans 1,3-Dichloropropylene	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND
1,1,2,-richloroethane	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether	ND	ND	ND	ND	ND	ND

ABC LABORATORIES, INC.

Spokane County Dept. of Utilities

Lab NO. 33317-90

NAME

(b) (6)

WELL NO.

1573F-2

1573C-6

0273D-2

0373A-2

1073L-2

2273A-1

Chloroform	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ND	ND	ND	ND	ND	ND
Trichloroethylene	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	<1	ND	ND	ND	ND
Tetrachloroethylene	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND
1-Pentene	ND	ND	ND	ND	ND	ND
Cyclopentane	ND	ND	ND	ND	ND	ND
Trans 2-Hexene	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND
Ethylene DiBromide	ND	ND	ND	ND	ND	ND
Ethyl Benzene	ND	ND	ND	ND	ND	ND
M-xylene	ND	ND	ND	ND	ND	ND
O-xylene	ND	ND	ND	ND	ND	ND
P-xylene	ND	ND	ND	ND	ND	ND
Cumene	ND	ND	ND	ND	ND	ND
1,2,4-Trimethyl Benzene	ND	ND	ND	ND	ND	ND
P-cymene	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND
M-dichlorobenzene	ND	ND	ND	ND	ND	ND
O-dichlorobenzene	ND	ND	ND	ND	ND	ND
P-dichlorobenzene	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND
Trans 1,2-Dichloroethane	ND	ND	ND	ND	ND	ND
Trans 1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND
Cis 1,3-Dichloropropylene	ND	ND	ND	ND	ND	ND
Trans 1,3-Dichloropropylene	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND
1,1,2,-richloroethane	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether	ND	ND	ND	ND	ND	ND

AREA 05-01-89

PERFORMANCE STANDARDS

MAXIMUM ALLOWABLE CONTAMINANT CONCENTRATIONS



SYMBOL	LAYER	DESCRIPTION
1	ROAD	ROAD
2	RAILROAD	RAILROAD
3	WATER	WATER
4	WATER	WATER
5	WATER	WATER
6	WATER	WATER
7	WATER	WATER
8	WATER	WATER
9	WATER	WATER
10	WATER	WATER
11	WATER	WATER
12	WATER	WATER
13	WATER	WATER
14	WATER	WATER
15	WATER	WATER
16	WATER	WATER
17	WATER	WATER
18	WATER	WATER
19	WATER	WATER
20	WATER	WATER

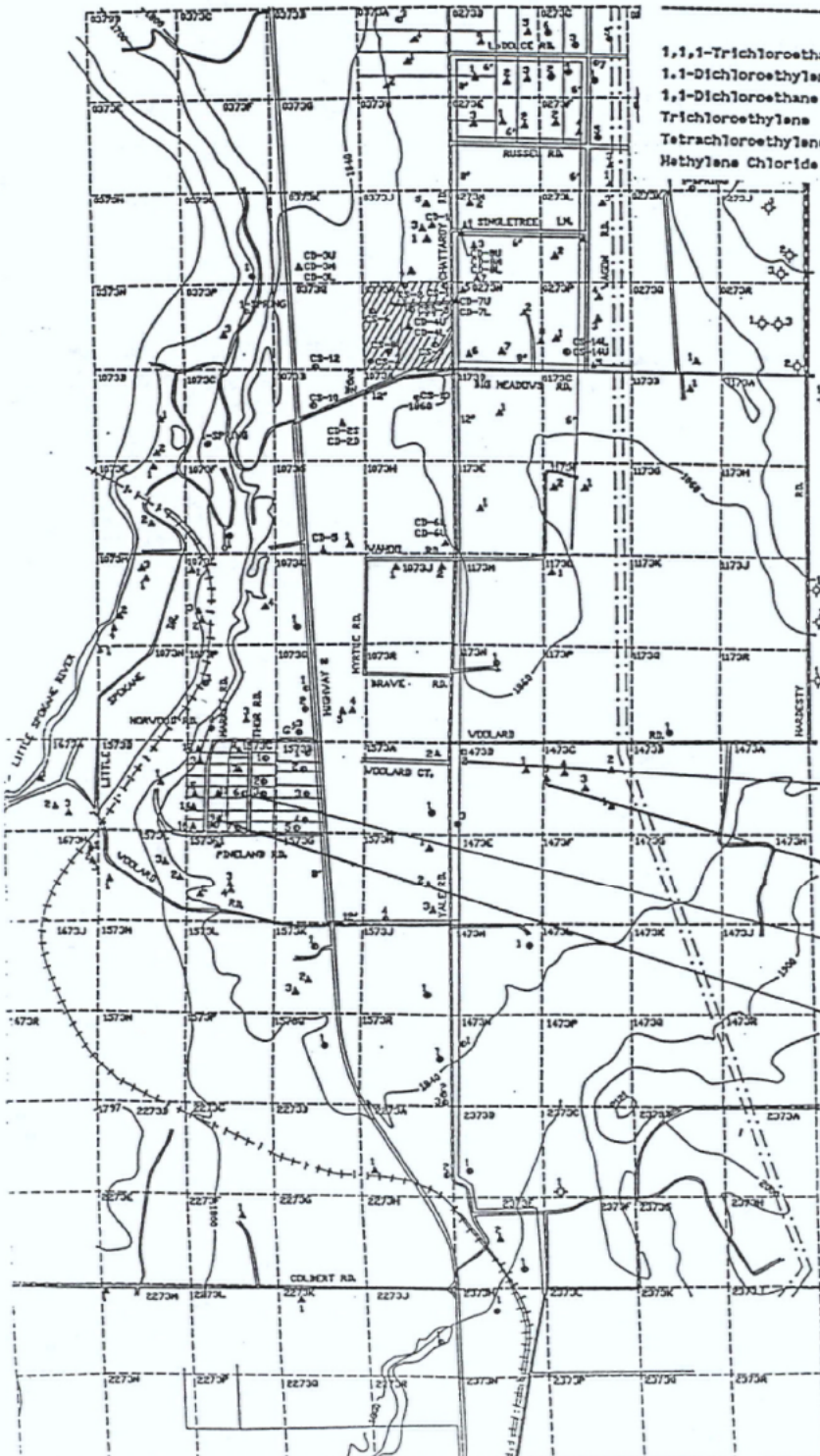
NOTE:

FOR IDENTIFICATION OF WELLS
SEE WELL DATA/NUMBER LEGEND

Health Protection Levels

• Health Protection Levels are not to be exceeded, during operational life of remedial action in effluents from groundwater treatment systems. Permanent reduction of contaminant concentrations below these levels throughout the site will indicate completion of the remedial action.

Contaminant	Maximum Concentration parts per billion (ug/l)	Basis
1,1,1-Trichloroethane (TCA)	200.0	MCL
1,1-Dichloroethylene (DCE)	7.0	MCL
1,1-Dichloroethane (DCA)	4050.0	MAG
Trichloroethylene (TCE)	5.0	MCL
Tetrachloroethylene (PCE or TETRA CL)	0.7	10 -5 cancer risk
Methylene Chloride (MC)	2.5	10 -5 cancer risk



SHALLOW
FEB 12, 90 33317-90 WELL # 111-TCA 11-DCE 11-DCA TCE TETRACL CHLOROFORM METH CHLOR.
(b) (6) 14730-2 HQ HQ HQ HQ HQ HQ HQ

DEEP
FEB 12, 90 33317-90 WELL # 111-TCA 11-DCE 11-DCA TCE TETRACL CHLOROFORM METH CHLOR.
(b) (6) 14730-3 HQ HQ HQ HQ HQ HQ HQ

SHALLOW
FEB 12, 90 33317-90 WELL # 111-TCA 11-DCE 11-DCA TCE TETRACL CHLOROFORM METH CHLOR.
(b) (6) 15730-6 EL HQ HQ HQ HQ HQ HQ HQ

DEEP
FEB 12, 90 33317-90 WELL # 111-TCA 11-DCE 11-DCA TCE TETRACL CHLOROFORM METH CHLOR.
(b) (6) (HEM-NORTH) 15730-10 HQ HQ HQ HQ HQ HQ HQ

AREA 05-01-89

PERFORMANCE STANDARDS

MAXIMUM ALLOWABLE CONTAMINANT CONCENTRATIONS



SYMBOL	DESCRIPTION
1	BOUNDARY
2	WATER
3	ROAD
4	RAILROAD
5	UTILITY
6	WELL
7	WELL
8	WELL
9	WELL
10	WELL
11	WELL
12	WELL
13	WELL
14	WELL
15	WELL
16	WELL
17	WELL
18	WELL
19	WELL
20	WELL
21	WELL
22	WELL
23	WELL
24	WELL
25	WELL
26	WELL
27	WELL
28	WELL
29	WELL
30	WELL
31	WELL
32	WELL
33	WELL
34	WELL
35	WELL
36	WELL
37	WELL
38	WELL
39	WELL
40	WELL
41	WELL
42	WELL
43	WELL
44	WELL
45	WELL
46	WELL
47	WELL
48	WELL
49	WELL
50	WELL
51	WELL
52	WELL
53	WELL
54	WELL
55	WELL
56	WELL
57	WELL
58	WELL
59	WELL
60	WELL
61	WELL
62	WELL
63	WELL
64	WELL
65	WELL
66	WELL
67	WELL
68	WELL
69	WELL
70	WELL
71	WELL
72	WELL
73	WELL
74	WELL
75	WELL
76	WELL
77	WELL
78	WELL
79	WELL
80	WELL
81	WELL
82	WELL
83	WELL
84	WELL
85	WELL
86	WELL
87	WELL
88	WELL
89	WELL
90	WELL
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95	WELL
96	WELL
97	WELL
98	WELL
99	WELL
100	WELL

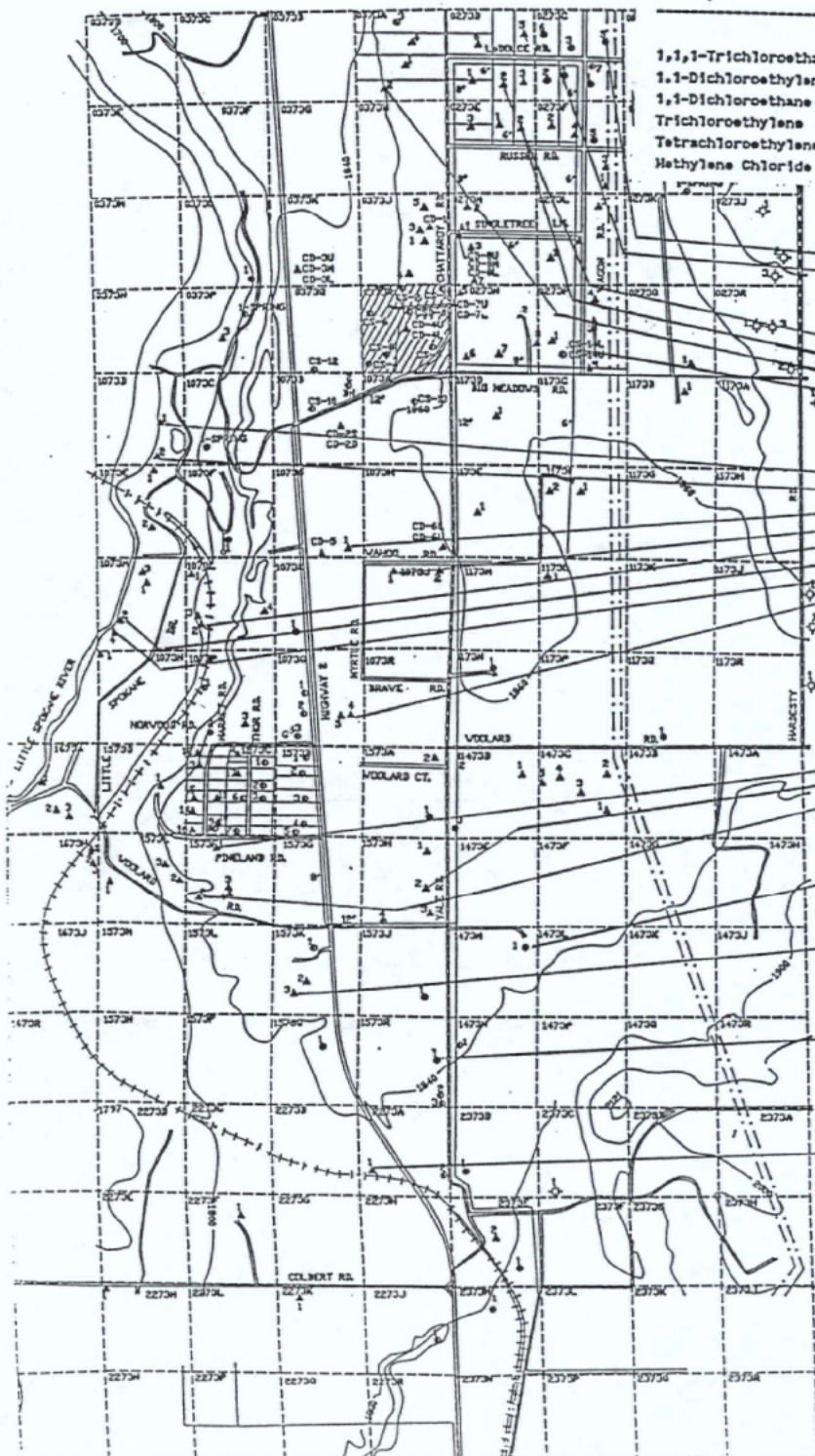
NOTE:

FOR IDENTIFICATION OF WELLS
SEE WELL SYMBOL/MARKER LEGEND

Health Protection Levels*

* Health Protection Levels are not to be exceeded, during operational life of remedial action in effluents from groundwater treatment systems. Permanent reduction of contaminant concentrations below these levels throughout the site will indicate completion of the remedial action.

Contaminant	Maximum Concentration parts per billion (ug/l)	Basis
1,1,1-Trichloroethane (TCA)	200.0	HCL
1,1-Dichloroethylene (DCE)	7.0	HCL
1,1-Dichloroethane (DCA)	4050.0	MAG
Trichloroethylene (TCE)	5.0	HCL
Tetrachloroethylene (PCE or TETRA CL)	0.7	10 - 5 cancer risk
Methylene Chloride (MC)	2.5	10 - 5 cancer risk



SHALLOW	FEB 12, 90 #33317-90	WELL #	111-TCA	11-DCE	11-DCA	TCE	TETRA CL	CHLOROFORM	METH CHLOR
(b) (6)		14730-1	ND	ND	ND	ND	ND	ND	ND
(b) (6)		14730-2	ND	ND	ND	ND	ND	ND	ND

DEEP	FEB 12, 90 #33317-90	WELL #	111-TCA	11-DCE	11-DCA	TCE	TETRA CL	CHLOROFORM	METH CHLOR
(b) (6)		14730-1	ND	ND	ND	ND	ND	ND	ND
(b) (6)		14730-2	ND	ND	ND	ND	ND	ND	ND
(b) (6)		14730-3	ND	ND	ND	ND	ND	ND	ND

DEEP	FEB 12, 90 #33317-90	WELL #	111-TCA	11-DCE	11-DCA	TCE	TETRA CL	CHLOROFORM	METH CHLOR
(b) (6)		14730-1	ND	ND	ND	ND	ND	ND	ND
(b) (6)		14730-2	ND	ND	ND	ND	ND	ND	ND
(b) (6)		14730-3	ND	ND	ND	ND	ND	ND	ND
(b) (6)		14730-4	ND	ND	ND	ND	ND	ND	ND
(b) (6)		14730-5	ND	ND	ND	ND	ND	ND	ND

DEEP	FEB 12, 90 #33317-90	WELL #	111-TCA	11-DCE	11-DCA	TCE	TETRA CL	CHLOROFORM	METH CHLOR
(b) (6)		14730-1	ND	ND	ND	ND	ND	ND	ND
(b) (6)		14730-2	ND	ND	ND	ND	ND	ND	ND
(b) (6)		14730-3	ND	ND	ND	ND	ND	ND	ND

SHALLOW	FEB 12, 90 #33317-90	WELL #	111-TCA	11-DCE	11-DCA	TCE	TETRA CL	CHLOROFORM	METH CHLOR
(b) (6)		14730-1	ND	ND	ND	ND	ND	ND	ND

DEEP	FEB 12, 90 #33317-90	WELL #	111-TCA	11-DCE	11-DCA	TCE	TETRA CL	CHLOROFORM	METH CHLOR
(b) (6)		14730-1	ND	ND	ND	ND	ND	ND	ND

SHALLOW	FEB 12, 90 #33317-90	WELL #	111-TCA	11-DCE	11-DCA	TCE	TETRA CL	CHLOROFORM	METH CHLOR
(b) (6)		14730-1	ND	ND	ND	ND	ND	ND	ND

DEEP	FEB 12, 90 #33317-90	WELL #	111-TCA	11-DCE	11-DCA	TCE	TETRA CL	CHLOROFORM	METH CHLOR
(b) (6)		14730-1	ND	ND	ND	ND	ND	ND	ND